## **ABSTRACT OF THE DISCLOSURE**

A method of adaptively writing magnetic memory cells of a MRAM is disclosed according to an embodiment of the present invention. The method comprises providing a logical data block of a memory array having magnetic memory cells, each magnetic memory cell in a known initial state and each magnetic memory cell configured along an easy-axis magnetic field generating conductor and writing to the magnetic memory cells using a predefined minimum current level. The method may further comprise sensing the magnetic memory cells to determine if data has been successfully written, incrementing the current level if writing was unsuccessful and repeating above.

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